

Callophrys hesseli (Hessel's Hairstreak)

Priority 1 Species of Greatest Conservation Need (SGCN)

Class: *Insecta* (Insects)

Order: *Lepidoptera* (Butterflies, Skippers, And Moths)

Family: *Lycaenidae* (Gossamer-winged Butterflies)

General comments:

only four populations in southern ME; potential exists for only a couple more discoveries; rare host plant and specialized habitat; globally rare

Species Conservation Range Maps for Hessel's Hairstreak:

Town Map: [Callophrys hesseli_Towns.pdf](#)

Subwatershed Map: [Callophrys hesseli_HUC12.pdf](#)

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation:

Maine Status: **Endangered**

State Special Concern or NMFS Species of Concern: NA

Recent Significant Declines: NA

Regional Endemic: NA

High Regional Conservation Priority: NA

High Climate Change Vulnerability: NA

Understudied rare taxa:

Recently documented or poorly surveyed rare species for which risk of extirpation is potentially high (e.g. few known occurrences) but insufficient data exist to conclusively assess distribution and status. *criteria only qualifies for Priority 3 level SGCN*

Notes: only four populations in southern ME; potential exists for only a couple more discoveries; rare host plant and specialized habitat; globally rare

Historical: NA

Culturally Significant: NA

Professional Discretion:

Current criteria ranked *Callophrys hesseli* as SGCN priority 2, however, species should qualify as SGCN priority 1 based on professional discretion.

Justification: state endangered; only four populations in southern ME; habitat rare and vulnerable

Habitats Assigned to Hessel's Hairstreak:

Formation Name		Northeastern Wetland Forest	
Macrogroup Name		Coastal Plain Peat Swamp	
Habitat System Name:		North Atlantic Coastal Plain Basin Peat Swamp	**Primary Habitat** Notes: where host plant (Atlantic White Cedar) present
Formation Name		Peatland	
Macrogroup Name		Northern Peatland & Fens	
Habitat System Name:		Boreal-Laurentian Bog	**Primary Habitat** Notes: where host plant (Atlantic White Cedar) present

Stressors Assigned to Hessel's Hairstreak:

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Stressor Priority Level based on Severity and Actionability		Moderate Severity	High Severity
	Highly Actionable	Medium-High	High
	Moderately Actionable	Medium	Medium-High
	Actionable with Difficulty	Low	Low

IUCN Level 1 Threat**Biological Resource Use****IUCN Level 2 Threat:** Logging and Wood Harvesting**Severity:** Moderate Severity**Actionability:** Highly actionable**Notes:** Atlantic White Cedar can be a valuable market tree; limited/careful harvesting is likely sustainable**IUCN Level 1 Threat****Other Options****IUCN Level 2 Threat:** Lack of knowledge**Severity:** Moderate Severity**Actionability:** Highly actionable**Notes:** Need better knowledge of how to successfully regenerate Atlantic White Cedar; lack of comprehensive survey effort and monitoring to identify additional occurrences and status/trends of individual populations**IUCN Level 1 Threat****Residential and Commercial Development****IUCN Level 2 Threat:** Housing and Urban Areas**Severity:** Severe**Actionability:** Moderately actionable**Notes:** Few occurrences documented; all in areas of southern Maine with active development in vicinity**IUCN Level 1 Threat****Energy Production and Mining****IUCN Level 2 Threat:** Mining and Quarrying**Severity:** Moderate Severity**Actionability:** Moderately actionable**Notes:** At least one site is proximate to active quarrying**IUCN Level 1 Threat****Residential and Commercial Development****IUCN Level 2 Threat:** Commercial and Industrial Areas**Severity:** Moderate Severity**Actionability:** Moderately actionable**Notes:** At least one site is proximate to commercial development**IUCN Level 1 Threat****Climate Change and Severe Weather****IUCN Level 2 Threat:** Droughts**Severity:** Moderate Severity**Actionability:** Actionable with difficulty**Notes:** Extended droughts might affect hydrology and species composition of AWC swamps**Species Level Conservation Actions Assigned to Hessel's Hairstreak:**

**Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.*

Conservation Action**Category:** Habitat Management**Biological Priority:** moderate**Type:** new

Conduct a comprehensive review of silvicultural effects on Atlantic White Cedar habitat (e.g., regeneration, composition, structure)

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

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Conservation Action	Category: Species Management	Biological Priority: moderate	Type: new
Develop Forestry Species Management Guidelines for distribution to cooperative landowners and forest management community.			

Stressor(s) Addressed By This Conservation Action

Logging and Wood Harvesting

Conservation Actions Associated with the Forested Wetlands Lepidoptera Guild:

Conservation Action	Category: Research	Biological Priority: high	Type: new
Prepare a statewide atlas and conservation assessment.			

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.